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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,893	09/04/2003	Troy Simmons	43789-268902	1534

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EXAMINER	
DANIELS, MATTHEW J	
ART UNIT	PAPER NUMBER
1732	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/656,893	SIMMONS ET AL.	
	Examiner	Art Unit	
	Matthew J. Daniels	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 November 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13,15-17 and 19-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13,15-17 and 19-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim rejections set forth previously under this section are withdrawn.

2. **Claims 28-30** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 28 recites "second tile shape" but there appears to be no first tile shape.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Rejections set forth previously under this section are withdrawn in view of the arguments presented in the 24 January 2007 interview. New rejections are presented below.

4. **Claims 13 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwarz (USPN 1619490) in view of Grundy (USPN 2120742) and Wells (USPN 5711126). **As**

to Claim 13, Schwarz teaches a method of providing a roof structure by the use of a tile mold, the method comprising:

Providing a first tile shape by use of a tile mold (page 1, line 95) having a generally "S"-shaped transverse cross section (Figs. 4-7) and including a cap and pan portion, the cap portion defining a concave surface and a pan portion defining a convex surface relative to the supporting surface (Figs. 4-7);

Providing a second tile shape by use of a tile mold, the second tile having a generally "S"-shaped transverse cross section and including a cap portion and a pan portion relative to the supporting structure (Figs. 3-7), wherein the second tile shape defines a necked portion between the pan portion and the cap portion having a thickness less than that of the cap or pan, further defining a breakage channel on one or more surfaces of the second tile shape (Figs. 3-7);

Breaking the second tile shape along the first breakage channel (page 2, left column);

Installing the first tile shape atop the supporting structure (implicit in that multiple shingles or tiles would be installed).

Schwarz is silent to the second breakage channel extending substantially normally to a longitudinal axis of the cap portion, breaking the cap portion along the second breakage channel, and installing one of the two cap portion sections of the second tile shape atop the cap portion of the first tile shape.

Grundy teaches providing a second breakage channel extending substantially normally to a longitudinal axis, and in view of Grundy's teaching it would have been obvious to break along a transverse channel to provide a different length.

Wells teaches installing one of the cap portions atop what would be the cap portion of the first tile shape (Figs. 12 and 13).

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the methods of Grundy and Wells into that of Schwarz (a) in order to provide varying lengths of tiles, which would produce a roof having a varied aesthetic quality as shown by Wells in Fig. 13 (note the differences in lengths of items 56) and (b) Schwarz provides tiles for roofs, and Grundy suggests the method for producing tiles for buildings, particularly for corners and angles (page 1, right column, lines 3-12) and it would have been desirable to install overlapping tiles as shown in Wells' Fig. 12 in order to keep water out of the roof structure.

As to Claim 17, Grundy teaches that transverse grooves can be created to provide cap portions of any length (See Fig. 1) and Wells teaches that the attaching includes attaching a cap portion atop the cap portion of the first tile shape (Figs. 12 and 13).

5. **Claims 15, 16, 19, 26, 27, and 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwarz (USPN 1619490). **As to Claim 15**, Schwarz teaches a method of providing multiple tile shapes from one tile mold, the method comprising the steps of:

Providing a first tile shape by use of a tile mold and a slipper, the first tile shape being generally a "S" tile shape (Fig. 5 and Claim 1);

Providing a second tile shape by use of the tile mold and a second slipper, the second tile shape being a generally "S" tile shape comprising a cap and pan portion and the second tile shape defining a separation channel that extends longitudinally between the cap portion and the pan portions along one or more surfaces of the second tile shape (Figs. 5 or 7 and Claim 2);

Breaking the second tile shape along the separation channel, such that the second S-tile shape is converted into two generally Mission tile shapes, one being a cap and one being a pan relative to the supporting surface (page 2, left column, lines 40-55).

Schwarz does not explicitly show a first slipper and a second slipper. However, Schwarz teaches that the forming means may include simply the double mold (Claim 1) or may include the downwardly extending rib (Claim 2). Thus, Schwarz teaches two slippers, the first lacking the downwardly extending rib and the second possessing the downwardly extending rib.

As to Claim 16, Schwarz teaches a method of providing a single tile simulating multiple tile shapes from one tile mold, the method comprising the steps of:

Providing a first tile shape by use of a tile mold and a first slipper, the first tile shape being a generally S-tile shape (Fig. 5 or Fig. 7 and Claim 1); and

Providing a second tile shape by use of a tile mold and a second slipper (Fig. 5 or Fig. 7 and Claim 2), the second tile shape being a generally S-tile shape and defining a necked portion between the cap and pan having a thickness less than the adjacent portions defining a simulation interface channel such that the tile shape simulates two tile shapes having "C"-shaped transverse cross sections (Fig. 5 or 7) and configured to facilitate breakage between the cap and pan (Page 2, lines 40-55).

Schwarz does not explicitly show a first slipper and a second slipper. However, Schwarz teaches that the forming means may include simply the double mold (Claim 1) or may include the downwardly extending rib (Claim 2). Thus, Schwarz teaches two slippers, the first lacking the downwardly extending rib and the second possessing the downwardly extending rib.

As to Claim 19, Schwarz teaches a method of providing a roof structure by use of a tile mold, the method comprising:

Providing a fist tile shape by use of the mold (page 2, lines 11-12), the first tile shape having a generally "S"-shaped transverse cross section (Figs. 5 and 7 and Claim 1) and including a cap portion and a pan portion, the cap portion defining a concave surface relative to a supporting surface and the pan portion defining a convex surface relative to the supporting surface (Figs. 5 and 7);

Providing a second tile shape having a generally "S"-shaped transverse cross section comprising a cap and a pan portions (Figs. 4-7 and Claim 2), wherein

The second tile shape defines a breakage channel on a surface of the second tile between the cap portion and the pan portion (Figs. 4-7 and Claim 2),

The breakage channel is configured to facilitate breakage of the second tile shape between the cap portion and the pan portion (page 2, lines 40-55), and

Each of the cap portion and the pan section have a generally arcuate-shaped transverse cross section upon breaking; and breaking the second tile shape along the breakage channel (page 2, lines 40-55).

Schwarz does not explicitly show a first slipper and a second slipper. However, Schwarz teaches that the forming means may include simply the double mold (Claim 1) or may include the downwardly extending rib (Claim 2). Thus, Schwarz teaches two slippers, the first lacking the downwardly extending rib and the second possessing the downwardly extending rib. **As to Claims 26 and 27**, Schwarz teaches the second tile shape comprising a necked portion

intermediate a pan and cap portion having a lesser thickness defining a breakage channel (Figs. 4-7) between the cap and pan portion on one or more surfaces of the second tile shape.

As to Claim 28, Schwarz teaches a method of providing a roof structure by use of a tile mold, the method comprising the steps of:

Providing a tile shape by use of a tile mold (Figs. 4-7 and Claim 1), the tile shape having a general S-shape transverse cross section and comprising a cap portion and a pan portion, wherein:

The cap portion defines a concave surface relative to a supporting surface (Figs. 5 and 7),

The pan portion defines a convex surface relative to the supporting surface (Figs. 5 and 7),

The tile shape defines at least one breakage channel on one or more surfaces of the tile shape (Fig. 2, item 34), where the breakage channel is configured to facilitate breakage of the second tile shape between the cap and pan (Figs. 4-7), and wherein each of the cap and pan have a generally arcuate shape transverse cross section upon breaking (Figs. 5 and 7);

Breaking the tile shape along at least one breakage channel (page 2, lines 40-55).

Schwarz appears to be silent to packaging to cap for shipment. However, because shipment and delivery of these tile shapes from the manufacturing facility to the worksite would have been obvious, packaging would have also been an obvious step over Schwarz's method. Transportation reads on "packaging". Additionally, rearrangement of the particular order of steps is generally considered to be prima facie obvious. In this case, it would have been obvious to rearrange the order of breaking and packing.

6. **Claims 21 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwarz (USPN 1619490) in view of Wells (USPN 5711126). Schwarz teaches the subject matter of Claim 19 above under 35 USC 1039a). **As to Claim 21**, Schwarz appears to be silent to the claimed installation configuration. However, Wells teaches installing a cap portion of a second tile vertically adjacent the cap portion of the first shape (Figs. 12 and 13). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Wells into that of Schwarz in order to provide overlapping tiles that help keep water out of a roof. **As to Claim 22**, Schwarz appears to suggest that the tiles are broken prior to shipment, however, this limitation appears to be drawn only the order of steps, and rearrangement of the order of steps is generally deemed to be prima facie obvious. Here, either order of steps of breakage and packaging for shipment would have been obvious, and transportation from the manufacturing facility to the job site reads on "packaging".

7. **Claims 23-25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwarz (USPN 1619490) in view of Wells (USPN 5711126) and further in view of Grundy (USPN 2120742). Schwarz and Wells teach the subject matter of Claim 21 above under 35 USC 103(a). **As to Claim 23**, Wells shows different length parts (Fig. 13), but appears to be silent to the two different lengths. However, Grundy teaches providing a tile having two different lengths (Fig. 1, item 4). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Grundy into that of Schwarz (a) in order to provide varying lengths of tiles, which would produce a roof having a varied aesthetic quality (b)

Schwarz provides tiles for roofs, and Grundy suggests the method for producing tiles for buildings, particularly for corners and angles (page 1, right column, lines 3-12).

As to Claim 24, Schwarz provides the breakage in the first breakage channel (page 2, left column) and Grundy teaches breaking along second breakage channel (Fig. 1, item 4). Wells teaches installing the first tile shape (Fig. 13, items 56) and attaching the cap portion vertically adjacent the cap portion of the first tile shape (item 10, Fig. 13). **As to Claim 25**, Schwarz teaches breakage along the first breakage channel (page 2, lines 40-55), and Grundy teaches breakage along the second channel (Fig. 1, item 4). Wells teaches installing the tile shapes atop the supporting structure (Fig. 13, item 56) and subsequently attaching the cap portions along the first tile shapes (Fig. 13, item 10).

8. **Claims 29 and 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwarz (USPN 1619490) in view of Grundy (USPN 2120742). Schwarz teaches the subject matter of Claim 28 above under 35 USC 103(a). As to Claims 29 and 30, Schwarz teaches a necked portion extending between the cap and pan, wherein the necked portion has a thickness less than the cap or pan portion (Figs. 4-7). Schwarz appears to be silent to the transverse breakage channel (or normal to the longitudinal axis). However, Grundy teaches that it is known to provide both longitudinal and transverse breakage channels (Item 4, Fig. 1).

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Grundy into that of Schwarz (a) in order to provide varying lengths of tiles, which would produce a roof having a varied aesthetic quality (b)

Schwarz provides tiles for roofs, and Grundy suggests the method for producing tiles for buildings, particularly for corners and angles (page 1, right column, lines 3-12).

Response to Arguments

9. Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Daniels whose telephone number is (571) 272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJD 2/5/07

MJD

MARK EASHOO, PH.D
PRIMARY EXAMINER

05/Feb/07